

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained according to the minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook and Virginia Regulations VR 625-02-00 Erosion and Sediment Control Regulations.
2. The plan-approving authority must be notified one week prior to the pre-construction conference, one week prior to the commencement of land-disturbing activity, and one week prior to the final inspection.
3. All erosion and sediment control measures are to be placed prior to or as the first step in clearing.
4. A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
5. Prior to commencing land-disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas), the contractor shall submit a supplementary erosion and sediment control plan to the owner for review and approval by the plan-approving authority.
6. The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the plan-approving authority.
7. All disturbed areas are to drain to approved sediment control measures at all times during land-disturbing activities and during site development until final stabilization is achieved.
8. During dewatering operations, water will be pumped into an approved filtering device.
9. The contractor shall inspect all erosion control measures periodically and after each runoff-producing rainfall event. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

This project consists of the demolition of the existing Loudoun County Adult Detention Center, filling the cellar cavity with approved fill and matching the existing grade with appropriate base and subbase to leave the site as a stabilized parking area, and terminating and abandoning site utilities connected to the Detention Center. 0.24 acres of the 1.89-acre site will be disturbed in the course of this project.

EXISTING CONDITIONS

The 1.89-acre site is located in the northeast quadrant of the intersection of Church Street and Edwards Ferry Road and is owned by The County of Loudoun (Zone: TOWNS, Tax Map #: /48/A//31//1/, PIN: 231-38-8886). Existing on the site are a 2-story detention center along the west boundary adjacent to Church Street (with a trailer, an inmate courtyard, fences, a shed, concrete pads, and utility structures), 4 criminal-courts offices along the south boundary adjacent to Edwards Ferry Road (with fences and sidewalks), a 2-story sheriff's office along the extreme north boundary adjacent to Cornwall Street (with concrete pads and a sidewalk), and paved parking areas throughout. ½ of the detention center's roof drains into Edwards Ferry Road via roof leaders routed through the south retaining wall. The largest portion of the site drains to the east via sheet flow to 2 curb inlets which are part of an existing storm sewer system. A smaller portion of the site drains to the north toward Cornwall Street via sheet flow. The slope of the ground ranges between 2-6%.

ADJACENT PROPERTY

A 0.46-acre parcel owned by The Town of Leesburg is located along the north boundary, adjacent to the detention center (Zone: TOWNS, Tax Map #: /48/A//31//15, PIN: 231-38-9999); Cornwall Street is located along the extreme north boundary; a parcel owned by Sheraw at Edwards Ferry, et. al. is located to the northeast (Zone: TOWNS, Tax Map #: /48/A//31/C213, PIN: 231-39-2798); to the northwest is a 0.49-acre parcel owned by Nicholas C. Donnangelo (Zone: TOWNS, Tax Map #: /48/A//31/2/14/, PIN: 231-49-0110); Edwards Ferry Road is located along the south boundary; a 0.27-acre parcel owned by Peter J. Chopivsky is located to the southeast (Zone: TOWNS, Tax Map #: /48/A//31//6/, PIN: 231-39-1278); a parcel owned by Loudoun Street Associates, et. al. is located to the east (Zone: TOWNS, Tax Map #: /48/A//31/C1-1, PIN: 231-39-2378); and Church Street is located along the west boundary.

OFF-SITE AREAS

There will be no soil stockpile or waste areas on- or off-site during this project.

SOILS

There is no soils data available for this site.

EROSION AND SEDIMENT CONTROL NARRATIVE (CONTINUED)

CRITICAL EROSION AREAS

There are no critical erosion areas on this site.

EROSION AND SEDIMENT CONTROL MEASURES

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices shall be constructed and maintained according to the minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook (Third ed. 1992). The minimum standards of the VESCH shall be adhered to unless otherwise waived or approved by a variance.

STRUCTURAL PRACTICES

1. Storm Drain Inlet Protection 3.07

The 2 storm sewer curb inlets located at the east portion of the site shall be protected during the life of this project and until the site is fully stabilized. Sediment-laden runoff shall be filtered before entering the storm sewer curb inlets.

2. Temporary Construction Entrance 3.02

No temporary construction entrance will be constructed for this site since all entrances to the site are paved and will not be disturbed. However, the contractor shall take steps to insure that no soil shall enter the roadway from the site via construction vehicles. The entrance by way of Cornwall Street shall be used to access the site.

SEQUENCE OF EVENTS

1. Install storm drain inlet protections for both curb inlets at east portion of site.
2. Construct covered pedestrian walkway.
3. Remove 3 bollards, as indicated, nearest to existing shed and trailer adjacent to inmate courtyard.
4. Remove existing shed and trailer.
5. Remove chain-link fencing surrounding Inmate courtyard and wood fencing adjacent to cemetery.
6. Cut and cap 4" water line at water valve in Edwards Ferry Road. Cut 4" water line at water meter vault and at connection to detention center as necessary and remove water meter vault. Abandon 4" water line.
7. Cut and cap 4" sanitary sewer line from Church Street and 6" sanitary sewer line from Edwards Ferry Road within property boundaries. Cut both sanitary sewer lines at detention center connections as necessary. Remove cleanout and cap in place. Abandon sanitary sewer lines.
8. Cut electric lines at utility poles (adjacent to Edwards Ferry Road and at the intersection of Edwards Ferry Road and Church Street) and at detention center connections. Remove electric utility structures (cutting electric lines at connections as necessary) and concrete pads. Abandon electric lines.
9. Terminate gas utility lines per Washington Gas requirements.
10. Remove 2-story detention center, building entrances, portions of sidewalk, and inmate courtyard. Cut detention center walls to 1 foot below grade. Abandon detention center slab and remainder of walls.
11. Fill cellar void with approved fill and compact to 12 inches below grade. Fill last 12 inches with 21B subbase and compact, bringing cellar void to grade and slope to drain to existing inlets.
12. Repave disturbed areas in streets where utilities have been disconnected.
13. Once site is fully stabilized, remove Inlet protections from curb inlets.

PERMANENT STABILIZATION

The disturbed area for this project will be fully stabilized with the filling of the cellar void with approved fill and bringing it to final grade with 21B subbase.

STORM WATER MANAGEMENT

Pre- and post-demolition runoff for this site indicates that the amount of flow entering existing structure 3 is increased from 5.11 cfs to 5.36 cfs. This is due to an increase in drainage area to the inlet. In the pre-demolition condition, ½ of the detention center's roof drains into Edwards Ferry Road. In the post-demolition condition, this area drains to existing structure 3 - increasing the flow rate to the structure by 0.25 cfs. However, it is shown that the existing storm sewer system can adequately convey this additional flow.

EROSION AND SEDIMENT CONTROL NARRATIVE (CONTINUED)

MAINTENANCE

All erosion and sediment control measures shall be checked to insure that they are functioning adequately daily and after each significant rainfall event.

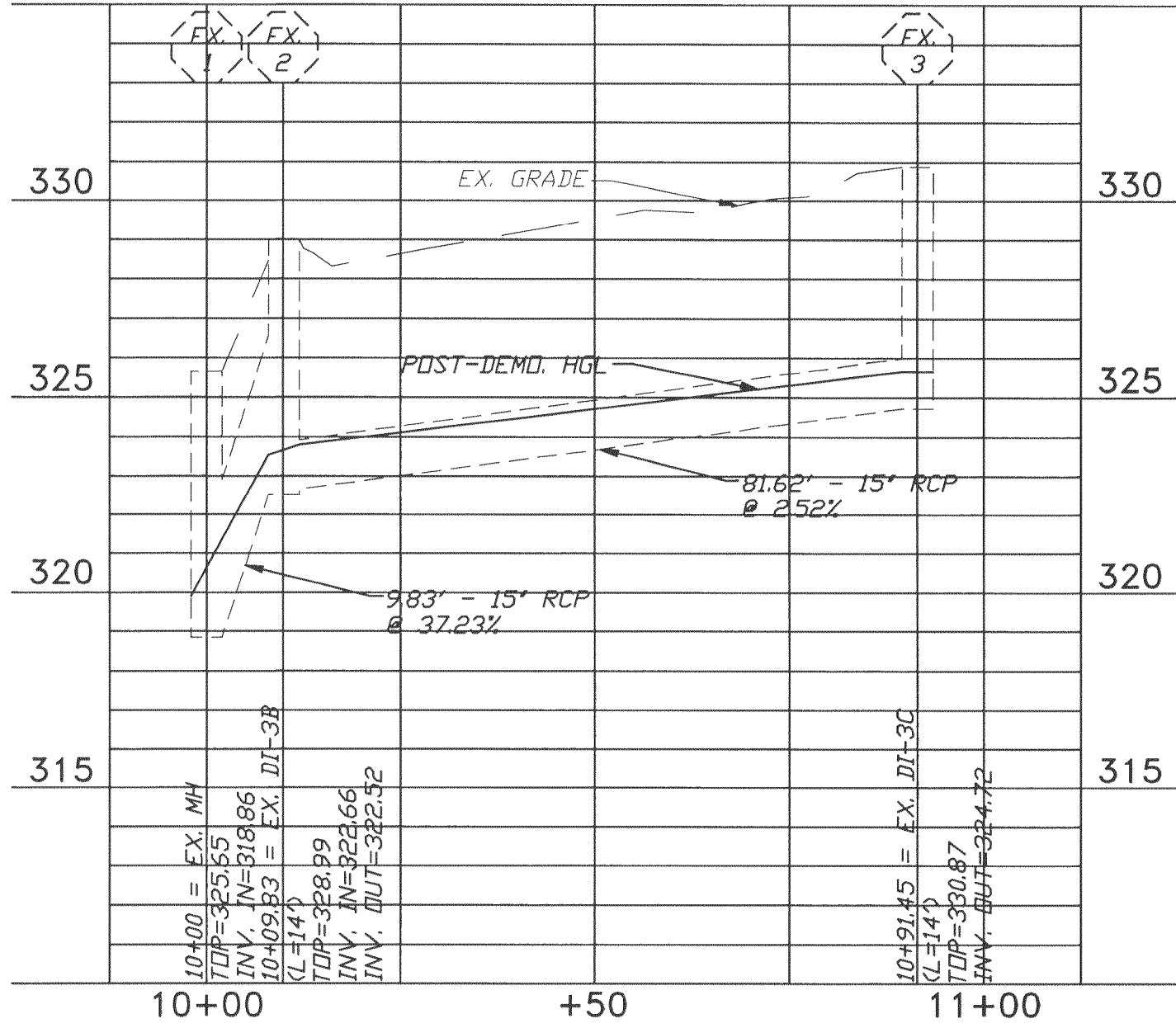
Appendix 9B-1 LD-204 Stormwater Inlet Computations

INLET																														Sag Inlets Only				REMARKS
NUMBER	TYPE	LENGTH (FT)	STATION	DRAINAGE AREA (AC)	C	CA	sum CA	I (IN/HR)	Q INCR (CFS)	Q <sub>c</sub> CARRYOVER (CFS)	Q <sub>t</sub> BUTTER FLOW (CFS)	S <sub>1</sub> BUTTER SLOPE (FT/FT)	S <sub>2</sub> CROSS SLOPE (FT/FT)	T <sub>1</sub> SPREAD (FT)	V <sub>1</sub> (FT)	V <sub>T</sub>	S <sub>2</sub> (FT/FT)	S <sub>2</sub> S <sub>2</sub>	E <sub>1</sub> (App. 9C-3)	a = 12/(5(S <sub>2</sub> -S <sub>1</sub> )) + Local Depression	S <sub>2</sub> = S <sub>1</sub> + a (12/4)	S <sub>2</sub> = S <sub>1</sub> + S <sub>2</sub> (in.) (FT/FT)	COMPUTED LENGTH L <sub>1</sub> (FT) (App. 9C-17)	L <sub>1</sub> SPECIFIED LENGTH (FT)	LL <sub>1</sub>	E <sub>1</sub> (App. 9C-13)	Q <sub>1</sub> INTERCEPTED (CFS)	Q <sub>1</sub> CARRYOVER (CFS)	d (FT)	h (FT)	d <sub>h</sub>	T <sub>1</sub> SPREAD @ 54G (FT)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)		
3	DR-3C	14		0.810	0.91	0.737	0.737	5.8	4.24		4.24	0.006	0.0457		2.06									14.00			4.24	0.00	0.38	0.46	0.84	4.67	Post-Demolition Condition	
2	DR-3B	14		0.170	0.95	0.162	0.162	5.8	0.93		0.93	0.028	0.0460	3.09	2.06	0.65	0.083	1.7	0.94	1.01	0.04	0.088	11.62	14.00	1.21	1.00	0.93	0.00						Post-Demolition Condition

Appendix 9B-2 LD-229 Storm Drain Design Computations

FROM POINT	TO POINT	DRAINAGE AREA (ACRES)	RUNOFF COEFF.	CA		INLET TIME	RAINFALL	RUNOFF	INVERT ELEVATIONS		LENGTH	SLOPE	DIA	CAPACITY	VELOCITY	FLOW TIME MINUTES		REMARKS
(1)	(2)	(3)	(4)	INCREMENT	ACCUMULATED	(MIN)	(IN/HR)	(CFS)	UPPER	LOWER	(FT)	(FT/FT)	(IN)	(CFS)	(FPS)	INC.	ACCUM.	
3	2	0.810	0.91	0.737	0.737	5.0	7.27	5.36	324.72	322.66	81.62	0.0252	15	10.26	4.37	0.31	5.3	Post-Dem.
2	1	0.170	0.95	0.162	0.899	5.0	7.27	6.53	322.52	318.86	9.83	0.3723	15	39.40	5.32	0.03	5.0	Post-Dem.

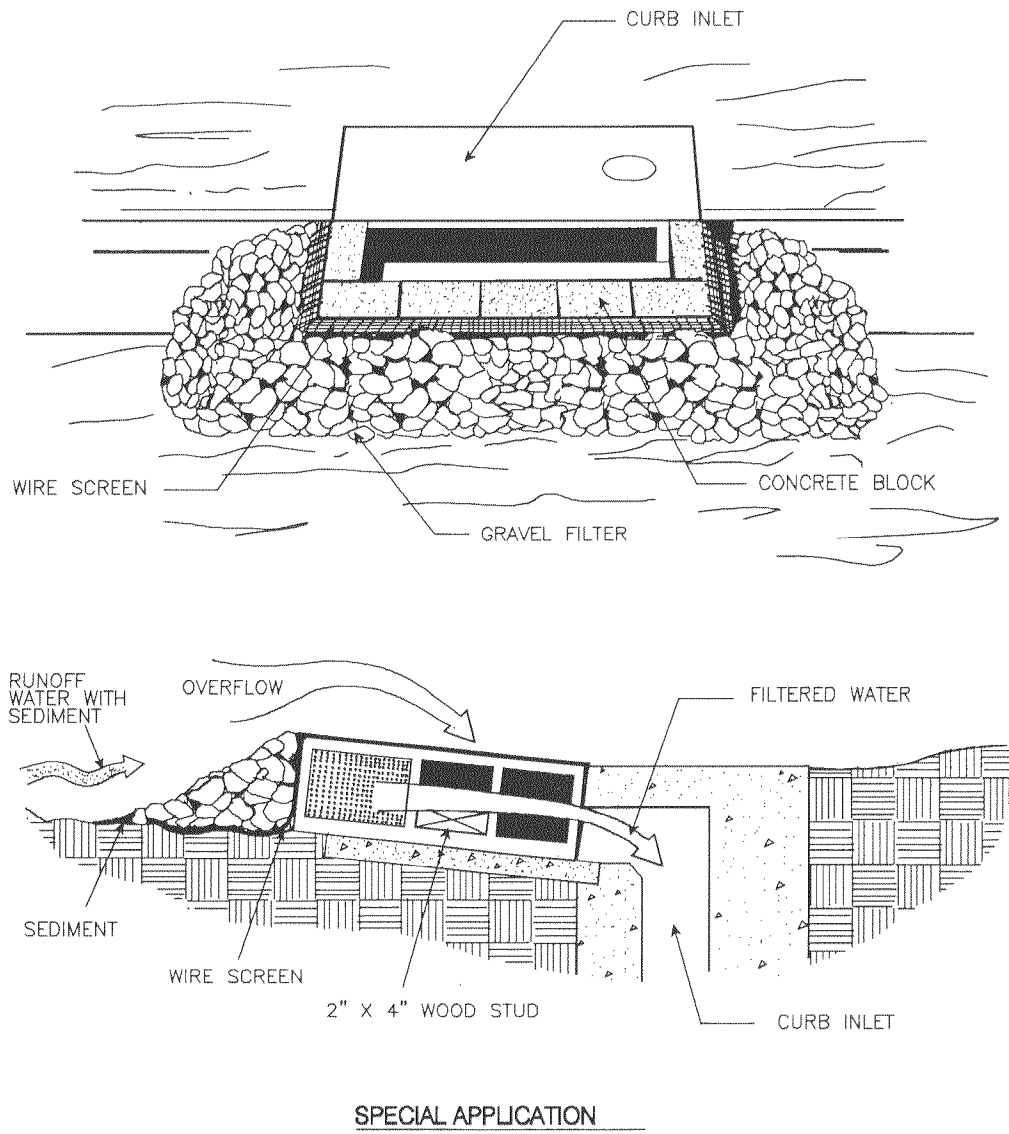
STORM SEWER PROFILE EX 1 TO EX 3



SCALE

H: 1"=20'  
V: 1"=4'

BLOCK & GRAVEL CURB INLET SEDIMENT FILTER



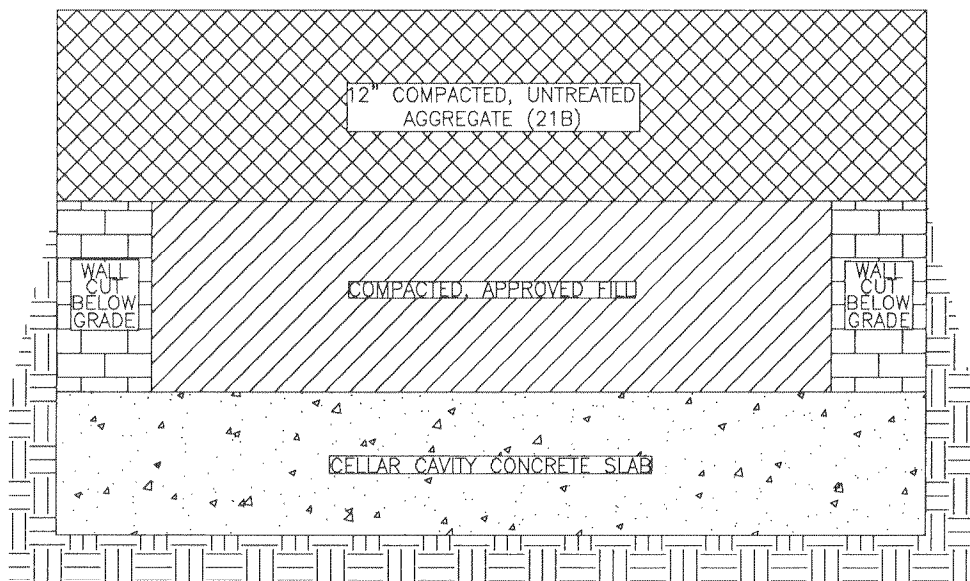
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

\* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE

SOURCE: VA, DSWC

PLATE 3.07-B

CELLAR CAVITY FILL CROSS-SECTION



NOT TO SCALE

Date

Description

Rev. #

Date: 10/06/2007

Cadd. file no.: C-4.DWG

Job no.:

Scale: NTS

Designed by

Drawn by

Checked by

PROFESSIONAL SEAL

LOUDOUN COUNTY ADULT DETENTION CENTER  
LEESBURG, VIRGINIA

EROSION & SEDIMENT CONTROL NARRATIVE, NOTES, AND DETAILS

Drawing Number:

C-4